Weekly Report for 10/06/2014

APS Renewal and Upgrade
• Provided slides for Upgrade Radiation meeting with G. Decker, N. Grossman, and K. Harkay. Slides gave an estimate of the pressure and effective atomic number where dose outside of a beamline hutch would exceed 100 mrem per year. Estimate was based on data from TB-54. (Jeff Dooling)

MCR Operations

Storage Ring Operations
• Found a problem with some MPS wire connections and a cabinet doors in sector 19/20, which caused MPS trips. The door should remain closed for the remainder of the week, but someone opened it anyways and dumped the beam.. I should have put a sign on the door.Determined the cause of a beam dump when performing an steering "undo". (Louis Emery)

• I found a missing row in a corrector request file (SRCorSetpts.req), which caused a 0.0 A setpoint for S14B:V4 to be sent to the datapool OC system during an undo operation after some steering. This request file is fixed now. (Louis Emery)

• Looked into repeated problem with orbit bump in sector 1. The data processing for ID01 x-ray bpm and Narrowband BPMs seem to have problems. So we remove these bpms. Rebooting fb ioc resolved the problem. Operators put them back when they started to behave. (Louis Emery)

• Looked into beam motion in ID21. Nothing unusual was found.I suspected that it is the beamline. (Louis Emery)

• Update sextupole limits for standardization to 240 A. (Louis Emery)

• Set up SR with higher chromaticity to reduce the mild instability during injection. Further discussed with C. Yao. (Louis Emery)

Linac Operations
• Set up a meeting to discuss modifications to the ACIS logic that would allow an ACIS-controlled gate valve to open permitting low-power laser light (Class II) through the transport line into the linac tunnel. (Jeff Dooling)

• Presently must in Controlled Access to do this; however, looking for a solution in Authorized Access. (Jeff Dooling)

APS Machine Studies

Storage Ring Studies
• Conducted SR study with K. Harkay to calibrate the FO loss monitor in S1; this time the scope cooperated and the study was successful. (Jeff Dooling)

• Conducted a second injector loss monitor study looking again at injected losses. S1 losses were greatly reduced relative to the injection loss signals recorded the previous week. (Jeff Dooling)

• The main difference here is that chromaticity was increased by one unit. (Jeff Dooling)

• Machine studies meeting. Gave some start-up notes. (Louis Emery)

• Attended meeting on ID30 spectrum measurement results, to determine why gap settings end up being different from expected. Thought about whether is was possible to have an energy error, which would explain achieving the spectrum that ID30 wanted. (Louis Emery)

• Discussed injection trajectory with Sajaev and Y. Sun after realignment had been done in the start-up. (Louis Emery)

• Investigation of slight instability during injection. The long-term TBT data was processed and we can see it is a x-tune motion that starts to grow 5 ms before injection. (why 5 ms?) The motion saturates at the time of injection, then suddenly disappears. [The cause was determined later to be a time window around injection in which P0 feedback is turned off.] (Louis Emery)

APS Machine Research and Development

Storage Ring Research and Development

• Attended SCU magnet meeting in Bld. 314 and reviewed installation of FO BLMs in the SCU1 cryostat with C. Doose, Q. Hasse (both ASD-MD), and K. Harkay. (Jeff Dooling)

• Talked to A. Blednykh about APS-U impedance. (Louis Emery)

Linac Research and Development

• Presented status of linac interleaving at the Photoinjector Physics meeting. (Jeff Dooling)

APS Machine Software

Storage Ring

• continue working on SR grid xray BPM calibration, finised the implementation of first 3 steps 1)setup 2) dark current measurement 3) BM offset measurement. (Hairong Shang)

• modified APSRampCorrVectorToSnapshot in SR steering PEM so that it keeps the existing values of correctors who are not included in the snapshot instead of setting them to zeros, becauase setting them to zeros caused beam dump if they were turned and had non-zero current. (Hairong Shang)

• fixed the non-existent variable names in FPGABpmTurnHistory. (need test the problem that Louis had) (Hairong Shang)

Injectors

• updated AcquireITSWaveforms to the scope change: replaced tekdpo5 by tekdpo4 since tekdpo4 is now being used for ITS scope, (Hairong Shang)

• improved BRampControl: added catch statement to cavget and display error message if there are channel access errors. (Hairong Shang)

General

• modified ExperimentDesigner that it removes the space between characters of the units to not break the SDDS format (Hairong Shang)

Simulation Software

• Continue to implement a consistent time coordinate in the haissinski code. This is to facilitate further upgrades. (Louis Emery)

Meetings, workshops, conferences, committees, LMS related, and reviews

• Making slides for low emittance ring workshop report to the group. (Louis Emery)

Safety and Required Training

- ASD115 ACIS Controlled Access Procedure. (Louis Emery)

Miscellaneous
- Wrote yearly report for performance appraisals. (Louis Emery)

- One POC-HP case. (Louis Emery)